

**Claims**

What is claimed is:

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1. A system for associative processing comprising:

an icon generator;

an associative memory controller connected to the icon

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generator;

an associative processing unit connected to the associative  
memory controller; and

a memory connected to the associative memory controller.

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2. The system of claim 1, wherein the icon generator is  
connected to a key data input.

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3. The system of claim 2, wherein the icon generator  
converts a key into an icon that includes of an address and a  
confirmmer.

4. The system of claim 3, wherein the icon generator uses a  
polynomial code to convert the key into the icon.

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5. The system of claim 1, wherein the icon generator can  
create an icon having a plurality of lengths.

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6. The system of claim 1, wherein the associative processing unit is capable of an icon algebra.

5 7. The system of claim 6, wherein the associative processing unit is capable of creating a first-second transform from a first transform and a second transform.

10 8. The system of claim 1, further including a plurality of icon generators connected to the associative memory controller.

15 9. The system of claim 1, further including a plurality of associative processing unit connected to the associative memory controller.

10. A system for associative processing comprising:

a transform generator having an input connected to a key data;  
20 an associative memory controller receiving an icon from the transform generator; and  
a memory connected to the associative memory controller.

11. The system of claim 10, wherein the icon is a hash.

12. The system of claim 10, wherein the transform generator includes a linear feedback shift register.

5       13. The system of claim 10, wherein the transform generator includes an icon lookup table.

14. The system of claim 10, wherein the associative memory controller compares a pair of confirmers to determine if a match has been found.

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15. The system of claim 10, further including an associative processing unit connected to the transform generator and the associative memory controller.

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16. The system of claim 15, wherein the associative processing unit combines a pair of transforms to form a new transform.

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17. The system of claim 15, wherein the associative processing unit removes a first transform from a second transform to form a new transform.